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ABSTRACT

This project, using the previous year's experience in identifying and classifying course-level goals as desired student learning outcomes, developed course goals in six more subject matter areas. Under the supervision of tricounty curriculum and evaluation specialists, 68 highly qualified teachers wrote course goals for art, health education, mathematics, music, physical education, and social science. Teachers in career education coded the course goals to career education program goals. The computer storage and retrieval system was programmed and the key-word dictionary for language arts goals is being prepared for a field test of the program. Conferences and workshops throughout the Portland Metropolitan area provided information and assistance to teachers in using course goals as tools for classroom instruction. A major effort in the project was to identify the type and level of learning required for the achievement of each goal. Prototype measurement items are being developed to assess each type of goal. Success in the project has encouraged its continuation to complete the storage and retrieval system, to develop items to measure achievement of goals at the course level, and to disseminate them and facilitate their use for goal definition, curriculum planning and development, instruction, evaluation, and accountability. Related documents are EA 004 942-948 and ED 061 043. (Author)

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DEVELOPMENT AND EVALUATION OF COURSE GOALS IN
MATHEMATICS, SOCIAL STUDIES, ART, MUSIC
HEALTH, AND PHYSICAL EDUCATION FOR GRADES K-12

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INTRODUCTION

The success of the pilot project (Project No. I-J-035) in developing course level goals for Biological and Physical Science, and Language Arts, along with the ready reception of those goals by educators in the field, encouraged the continuation of development of course level goals in other subject matter areas. Curriculum and evaluation directors in the tri-county area surrounding Portland elected to write course goals for Art, Health Education, Mathematics, Music, Physical Education and Social Science in order to provide goals for all the commonly selected core of subjects in elementary education.

Experience in the pilot project demonstrated the need to subclassify knowledge and process goals according to the type and level of learning required for achieving the desired goal. It became evident that this was a pre-requisite for developing the items for measuring the attainment of the goals. An additional need became apparent in respect to including goals related to student proficiency in the use of resource center and media materials, and for a cross reference of the course goals in all subject areas to Career Education goals. The identification of the values and concepts dealt with in the goals were seen as an important resource for curriculum and instruction planning and development.

Building on this experience and information, the efforts of the project were directed primarily to writing goals for the six subject areas selected, identifying the type and level of learning required for the achievement of each goal, cross-referencing the goals to career education goals, identifying teachable processes, and identifying the values and concepts dealt with in each goal. For a fuller description see Course Goals General Introduction, Section V of this report.

METHODS AND PROCEDURES

Each school district superintendent was asked to select a department head or curriculum specialist to gather from his district all statements of goals and objectives which had been used in teaching each of the six subject areas in his schools. These goals then became the starting point for the goals developers.

Concurrent with this activity was the development of tentative taxonomies for the subject matter in each area, the selection and training of teachers as goal writers, the identification, description, and classification of the types and levels of learning necessitated by the goal statements, the development of a set of goals for a practical student Career Education program, and the definition of value as a factor in learning. These tasks were accomplished by the Steering Committee with the help of various curriculum and evaluation persons in the Portland Metropolitan area and from the Oregon State Board of Education.

Goal writers were selected from superintendent nominations of outstanding teachers in each school district. The final selection was based on information and qualifications obtained by questionnaire to the candidates. (See Appendix A: Communications, questionnaire, and forms) Care was taken to have all grade levels and subject matter competencies in each subject area represented by the selected goal developers. This group then received orientation and training in a series of sessions totalling approximately 10 hours.

RESULTS

During the 4-week goal development workshop, the teachers examined and revised the goals and objectives which had been collected and they wrote additional goals to cover the subject program areas involved -- over 12,000 goals ranging from approximately 750 in Physical Education to 3500 in Social Science. As much as possible, the goals were coded as to grade level, type of knowledge or process learning involved, the program goal to whose achievement it contributed, Career Education cross-reference, and the key concept and value related words. In a 2 week follow up workshop, a group of editors completed the coding and did a first edit of the goals.

The final editing and production continued throughout the fall with the printing of the critique edition being completed December 15th. This critique edition includes:

- Course Goals General Introduction (revision of the 1971 critique edition),
Section V of this report.
- Course Goals in Art, Grades, K-12, Section VI of this report
- Course Goals in Health Education, Grades K-12, Section VII of this report
- Course Goals in Mathematics, Grades K-12, Section VIII of this report
- Course Goals in Music, Grades K-12, Section IX of this report
- Course Goals in Physical Education, Grades K-12, Section X of this report
- Course Goals in Social Science, Grades K-12, Section XI of this report

This critique edition provides an initial pool of course level goals that are of considerable value in assisting educators with goal definition related to curriculum planning and development, instruction, evaluation and accountability.

The goals in Language Arts (product of 1971 pilot project no. 1-J-035) are in the final stages of preparation for use to field test the computerized storage and retrieval system that has been programmed. When operational this will enable teachers to retrieve goals and related measurement items for any number of levels of instruction and inter-disciplinary combinations for use in instructional plans ranging from individualized instruction to inter-subject correlated instruction. (See Course Goals General Introduction, Section V of this report for a fuller description.)

Sets of the course goals collection have been made available to all schools in the tri-county area of Portland, to the Oregon State Board of Education curriculum specialists, to each Intermediate Education District curriculum department in Oregon. Many other educational institutions in, and outside Oregon, are obtaining copies of the course goals at production and handling costs. Portland State University has arranged to use the Course Goals in a special teacher training project and has approved a course in Course Goals and Process Learning for 3 hours credit.

Conferences and workshops throughout the tri-county area have provided opportunity for educators to exchange experiences and ideas relating to the use of the course goals. An unedited collection of these brainstorming-type of statements is reported in Workshop in Course Goal Uses, Section XII of this report.

CONCLUSIONS

It is apparent from the numerous requests for copies of the course goals collections that they are filling a greatly felt need in the area of instructional planning and evaluation. If, however, the requests from local teachers for inservice training and help in translating the course goals to classroom instructional objectives is a valid indication, there is need for preparing key persons in each school district to assist with the introduction and use of course goals. Some local teacher training institutions are interested in including methods of goal based instruction in their teacher preparation courses, but the main burden of this training of present teaching staff will rest on the individual school districts involved through in-service training, and instructional program development assistance.

Progress in programming for computer storage and retrieval indicates that the planned system is possible and that a tremendous potential is available for use of the computer in compiling and coordinating a wide range of inter-related instructional programs.

There is indication that the achievement of any desired results from having given a course of instruction can be measured if that desired result has been stated in accordance with the criteria used for a course goal. It is also evident that items developed for measurement of learning must include consideration of the type of learning involved as well as what was learned. In this respect, the concept of learning processes has opened a whole new field of inquiry. Some of the questions to which attention needs to be addressed are: What are the universal processes which cross all disciplines of learning? Which of the learning processes are teachable? Which are innate, or a function of life process of the human as a living organism? Investigation into these questions is needed to help clarify the problem of teaching "processes" along with "knowledge."

One firm conclusion is that classroom teachers must be involved in the production of the final results of projects for the improvement of public instruction if the results are to be easily translated into practical classroom use.